

U.S. Serial No. 09/685,288
Office Action of 2/11/2005
Amendment dated 6/10/05

REMARKS/ARGUMENTS

Claims 12-19 and 26-29 stand rejected as being unpatentable over U.S. Pat. No. 5,638,273 (hereinafter Coiner) in view of U.S. Pat. No. 6,633,782 (hereinafter Schleiss). Claims 12, 17 and 26 stand objected to because of lack of clarity, as perceived by the Examiner. Reconsideration of the rejections and objections is solicited in view of the foregoing amendments and the following remarks.

Applicant appreciates the courtesy of the Examiner in accepting a phone call from applicant held on June 9, 2005 with the expectation of clarifying issues and eliciting suggestions from the Examiner that may help in bringing forward the prosecution of the present invention. Claims 12, 17 and 26 have been amended in response to points made by the Examiner during the foregoing phone call and to further add to claim language clarity. Applicant respectfully submits that the claim language is sufficiently clear to comply with the statutory requirements of 35 U.S.C. 112, second paragraph and requests that the objections to claims 12, 17 and 26 be withdrawn.

Coiner, the main reference applied in the Office Action to reject claims, describes a vehicle data storage system that includes an on-board computer control device, which collects and records data supplied to it from a variety of sensors. The device provides for storing operational data at one frequency (i.e., one sampling frequency) while storing data surrounding an incident at a higher frequency (i.e., a higher sampling frequency). See Abstract of Coiner. The problem that Coiner purports to solve relates to limited memory capacity for storing data in an onboard device. See Coiner, column 1, line 30 et. seq. Coiner further explains that the dual sampling frequency used in his device provides the user with both low-resolution operational data covering a long period of time, and high-resolution incident data for incidents designated as being potential faults. See Coiner, column 2, line 56 et. seq. After the onboard device has recorded the data, the data may be transferred to another computer for storage and analysis.

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However, upon review of Coiner, the applicant could not find any description or relevant teaching in Coiner regarding any analysis of the faults and/or the data associated with the faults so as to rank or rate the criticality of the faults. This is not surprising since Coiner's consistent theme throughout his description is the purported ability to sample data at two distinct sampling frequencies based on a desired sampling resolution. Nowhere is Coiner concerned with classifying unranked fault data that may be collected from a fleet of mobile assets in order to, for example, identify a smaller set of faults, such as critical faults, that deserve a higher level of attention. For example, such faults could imminently result in a mission failure for the locomotive. It is respectfully submitted that one of ordinary skill in the art would not find in Coiner any relevant teaching or suggestion for the fault classification (e.g., sorting) techniques provided by the present invention. Coiner may well be useful for solving its intended limited problem (data sampling at a selectable sampling frequency) for saving memory storage but Coiner should not be unduly extended beyond its limited capabilities.

Claim 12 as amended is directed to a method for identifying critical faults in unranked fault data collected from a fleet of locomotives. That is, *inter alia* applicant is concerned with identifying critical faults from a universe of unranked (e.g., unclassified) faults. The critical faults may be indicative of a malfunction that, for example, would indicate imminent complete loss of operational capability of the locomotive. This fault identification or classification is important because instead of reacting with the same level of urgency to every possible fault that may occur, aspects of the claimed invention allow to focus on specific faults based on their respective classification. Claim 12 sets forth the following criteria for classifying the unranked fault data:

1. Relative frequency of fault occurrence;
2. Number of locomotives affected in the group; and
3. Expected level of reduction in locomotive operational performance.

Claim 12 further sets forth operational relationships (e.g., basis) for using the foregoing classifying criteria. Coiner nowhere teaches or suggests criteria for

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classifying faults from unranked fault data collected from a fleet of locomotives, much less teaches or suggests any relationships for utilizing such criteria. As discussed above, Coiner is merely concerned with choosing a sampling frequency that may be appropriate for obtaining a desired resolution and meeting data storage constraints. The only common item that applicant can discern between claim 12 and excerpts of Coiner cited by the Examiner is the appearance of the word "frequency." However, the use of the term "frequency" in claim 12 of the present application relates to the repetitiveness of fault occurrences as one of the basis for ranking such faults. However, this has nothing to do with the meaning of the word frequency as used by Coiner. There the word frequency is used in the sense of a sampling frequency at which data samples are taken. This has nothing to do with the concepts of the present invention. Applicant respectfully submits that Coiner is not applicable to the structural and operational relationships recited in claim 12 since the excerpts of Coiner that allegedly obviate claim 12 merely describe the distinct sampling frequencies techniques discussed above. However, as noted above, this has nothing to do with the concepts set forth in claim 12.

Schleiss appears to be cited for the tangential purpose of teaching a database. Accordingly, Schleiss fails to overcome the fundamental deficiencies discussed above regarding Coiner. In view of the foregoing remarks, it is respectfully asserted that the Coiner/Schleiss references, singly or in combination, fail to teach or suggest the structural and/or operational relationships recited in claim 12. Accordingly, it is respectfully submitted that the Coiner/Schleiss combination fails to render obvious claim 12 under the statutory standards of §103. Since each of the dependent claims from independent claim 12 includes the structural and/or operational relationships respectively recited in such independent claim, it is also respectfully submitted that the Coiner/Schleiss combination also fails to obviate each of such dependent claims.

Claim 17 is directed to a system for identifying critical faults in unranked fault data collected from a fleet of locomotives. Claim 17 specifically recites first, second and third classifiers that in combination allow classifying a fault as likely to result in an

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imminent locomotive mission failure. It is respectfully asserted that the Cainer/Schleiss references, singly or in combination, fail to teach or suggest the structural and/or operational relationships recited in claim 17. Accordingly, it is respectfully submitted that the Cainer/Schleiss combination fails to render obvious claim 17 under the statutory standards of §103. Since each of the dependent claims from independent claim 17 includes the structural and/or operational relationships respectively recited in such independent claim, it is also respectfully submitted that the Cainer/Schleiss combination also fails to obviate each of such dependent claims.

Claim 26 is directed to a system for identifying critical faults in unranked fault data collected from a fleet of locomotives. Claim 26 recites a processor configured to classify respective faults in the collected locomotive data based on specifically recited criteria and operational relationships set forth therein. It is respectfully asserted that the Cainer/Schleiss references, singly or in combination, fail to teach or suggest the structural and/or operational relationships recited in claim 26. Accordingly, it is respectfully submitted that the Cainer/Schleiss combination fails to render obvious claim 26 under the statutory standards of §103. Since each of the dependent claims from independent claim 26 includes the structural and/or operational relationships respectively recited in such independent claim, it is also respectfully submitted that the Cainer/Schleiss combination also fails to obviate each of such dependent claims.

It is respectfully submitted that each of the claims pending in this application recites patentable subject matter and it is further submitted that such claims comply with all statutory requirements and thus each of such claims should be allowed.

JUN-10-05 14:21

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The Examiner is invited to call the undersigned if clarification is needed on any aspects of this Reply/Amendment, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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